Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

SARS source back on the menu

For more information on the ***China Daily* report** see http://www.chinadaily.com.cn/cndy/2006-11/23/content_740408.htm

As a joint Hong Kong and Chinese research team announced confirmation that the civet cat was indeed the source of the severe acute respiratory syndrome (SARS) outbreak, reports of a return to old habits—selling and eating of the wild animal—has concerned authorities that the problem might recur again this winter.

According to the *China Daily*, joint research conducted by the Guangzhou Center for Disease Control and Prevention, the University of Hong Kong, and the Chinese Center for Disease Control and Prevention has shown the SARS virus isolates from civet cats taken from a restaurant where a female worker was infected in 2004 shared the same genetic profile with that isolated from human beings.

During the 2003 SARS outbreak, consumers avoided eating the animals and officials temporarily banned the sale of wildlife as food. Traders and farmers complained they had lost their only means of earning a living and the ban was lifted by the end of the year.

However, the first new SARS case in 2004, in Guangdong province, persuaded the authorities that the link between civet cats and human beings had to be broken by culling all the animals on farms, in markets, and in restaurants.

Since then there have only been sporadic SARS cases—most of them laboratory linked—and consumers have forgotten their fear of the civet cat. Although officially still banned, civet cats along with other wild animals are appearing in the markets in Guangdong. Farms, said to be raising more than 100 000 of the animals before the 2004 cull, are still thought to be operating.

The civet cat has long been considered a delicacy, valued for its "nutritious" meat, particularly in the winter months in southern China and Vietnam, with some tourists travelling to those regions specifically to eat civets and other exotic animals.

Wealthy non-mainland Chinese, Hong Kong residents, and Taiwanese have long supported the exotic animal industry. A survey done in Hong Kong in the late 1990s found that over 50% of respondents had eaten wild animals with the most common animal consumed being snakes, followed by civet cats (30%) and pangolins.

The printed journal includes an image merely for illustration

Reuters/China Photos

A vendor displays a civet cat at a wild animal market in Guangdong, China

With the winter solstice (Dec 23) and lunar new year, two feasts that all family members must attend if possible, the civet cat may well have found its way back onto southern Chinese tables, despite the effect that SARS had in that part of the world.

Margaret Harris Cheng

Typhoid carriers key to global transmission

Apparently healthy typhoid carriers have a key role in transmitting the infection around the world, and treatment of acute infections alone will not be enough to eliminate the disease. These conclusions come from a phylogenetic study of 105 globally representative strains of *Salmonella enterica* serovar Typhi.

Mike Delvin /Science Photo Library

Typhoid rash on a patient's foot

The study reveals that Typhi genotypes persist in single countries for decades or longer; and that "old" genotypes, which have probably been untouched by selection pressures, are unexpectedly common. Philippe Roumagnac and colleagues, the authors, conclude that such persistent genotypes, which have evolved neutrally, represent the carrier state and provide a persistent reservoir of genetic diversity for the pathogen.

The analysis also shows that many genotypes have independently acquired resistance to nalidixic acid. One of these, H58, predominates in southern Asia and has now reached Africa. These rapidly evolving genotypes represent infectious transmission and the evolution of fluoroquinolone resistance, the authors infer. "Within a decade, indiscriminate use of fluoroquinolones has yielded at least 15 independent *gyrA* genotypes that reduce susceptibility to nalidixic acid", said Roumagnac (Max Planck Institute for Infection Biology, Berlin, Germany).

The authors say their interpretation "would demand major changes in public-health campaigns to reduce the